

**SOCIOECONOMIC DETERMINANTS OF CHOICE AND USE OF MODERN
CONTRACEPTIVE METHODS: A CROSS-SECTIONAL STUDY IN KEBBI
STATE, NIGERIA**

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ABSTRACT

One major health benefit of family planning is the prevention of unintended pregnancies, which, in turn, reduces unsafe abortions, maternal morbidity, and mortality among women of reproductive age. This study examined the socioeconomic determinants of modern contraceptive choice and use among reproductive-age men and women in Kebbi State, Nigeria. We employed a cross-sectional approach to collect responses from 400 survey participants, which included both women and men of reproductive age (15-49 and 15-59, respectively). These study populations were systematically sampled in 11 rural and urban areas of the State. Data obtained were analyzed using Excel and SPSS (v 28.0) for descriptive and inferential analysis to meet the set objectives of the study. The findings of the survey revealed that condoms have the highest usage (10.5%) across all socioeconomic variables among middle-aged men aged 30-34. Also, for marital status and contraceptive utilization, married men had the largest proportion of male condom usage (28.2%. We also find that different factors affect the choice and use of modern methods of contraception among men and women in the study area. Muslim men had a higher likelihood than their Christian

counterparts were 38.1% more likely to choose condoms over others. Moreover, respondents with a tertiary level of education had the bulk (65.8%) of contraceptive utilization; hence, they adopted and used modern contraceptive methods more than those with basic education. Finally, respondents who earn 5-10,000 naira monthly were more likely than those with higher earnings to use modern methods of contraception, with condoms still maintaining the highest usage (36.8%). The study concluded that apart from condoms, uptake of other modern contraceptive methods remains low; therefore, there is a need to intensify and sustain current gains. It recommends that the Kebbi State Ministry of Health and humanitarian partners should institute appropriate interventions to increase contraceptive access and use, particularly among uneducated men and women in the study area.

Keywords: Family Planning - Modern contraception - use - Socioeconomic determinants - Kebbi - Nigeria

INTRODUCTION

Guaranteeing access to effective contraception and family planning methods is essential for achieving universal access to reproductive health-care services, as called for in the 2030 Agenda for sustainable development. The 2030 Agenda reaffirms the commitments made in the Programme of Action (PoA) of the International Conference on Population and Development (ICPD), adopted by 179 nations in Cairo, Egypt, in 1994. The ICPD PoA recognized the basic right of all couples and individuals to decide freely and responsibly the number, spacing, and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. About 20 years later, at the London Summit on Family Planning in 2012, the family planning and development communities came together to establish a common goal: to provide 120 million women and girls with access to contraceptives and reproductive health services (United Nations, 2019; WHO, 2020).

This goal was activated through the creation of the Family Planning 2020 initiative, which has seen great achievements in 71 economically deprived countries with high family planning needs. Although the target of 120 million envisioned users was not realized, 87 million additional users were added, and the number of women and girls with unmet need for contraception decreased (Cardona *et. al.*, 2025; United Nations, 2019). The initiative continues as Family Planning 2030 (FP2030) to further enhance reproductive health in low-income and middle-income countries (LMICs).

Contraception is a key part of Sustainable Development Goal (SDG) targets 3.1, 3.7, and 5.6, ensuring good health and well-being for all and promoting gender equality and the empowerment of women and girls, including universal access to reproductive health (RH) services. Contraception helps to prevent unintended pregnancies, which can lead to lower maternal mortality and fewer pregnancy-related deaths. It also reduces the need for unsafe abortions and transmission of HIV from mothers to newborns. Access to family planning is not only related to women's reproductive rights and the reduction of unintended pregnancies, but also to improving the health and nutritional status of children, brought about by longer birth spacing and the reduction in maternal mortality (WHO, 2023; United Nations, 2019).

Target 3.7 of the SDGs calls on countries "by 2030, to ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes". Living up to the commitment of the international community to achieve universal access to reproductive health by 2030 requires the monitoring of key family planning indicators. Trends in contraceptive prevalence

and need for family planning satisfied with modern methods indicate where increased investments and commitments by governments and international organizations are needed for the realization of reproductive rights for all people, and to help to fulfil the pledge of the 2030 Agenda for Sustainable Development that "no one will be left behind" (United Nations, 2019). While much progress has been achieved in expanding access to contraception since 1994, significant challenges persist, especially in sub-Saharan Africa (SSA). These challenges are mostly socioeconomic in nature.

Modern methods of contraception include oral contraceptive pills, implants, injectables, intrauterine devices (IUDs), female and male condoms, diaphragm/foam/jelly, rhythm, among others. Contraceptive use and unmet need for family planning are key to understanding profound changes in fertility and to improving reproductive health worldwide (WHO, 2020).

In choosing a method of contraception, dual protection from the simultaneous risk of HIV and other sexually transmitted diseases (STDs) also should be considered. Although hormonal contraceptives (pills) and IUDs are highly effective at preventing pregnancy, they do not protect against STDs, including HIV. Consistent and correct use of the male latex condom reduces the risk for HIV infection and other STDs, including chlamydial infection, gonococcal infection, and trichomoniasis (CDC, 2020). Contraceptive use is said to have prevented about 218 million unintended pregnancies in developing countries alone and, consequently, prevented 55 million unplanned births, 138 million abortions (40 million were unsafe), 25 million miscarriages, and 118,000 maternal deaths (WHO, 2014). Meanwhile, as of 2017, an estimated 214 million women in developing countries wanted to prevent pregnancy but were not using modern contraception (Guttmacher Institute, 2017).

Family planning allows people to attain their desired number of children and determine the spacing of pregnancies. This is achieved through the use of contraceptive methods and the treatment of infertility (Ikeako *et. al.*, 2018). Globally, 214 million women of reproductive age who want to avoid pregnancy are not using modern contraceptive methods (Kiwia *et. al.*, 2019). In sub-Saharan Africa, almost 51 million women in the fertility bracket had an unmet need for modern contraceptive methods (Kantorova *et. al.*, 2020). Stephenson *et al.* (2007) observed that modern contraceptive use (oral pills, condoms, intrauterine devices, sterilisation, implants, and injectables) has traditionally been low in sub-Saharan Africa, but there was evidence of an increase in usage in the past decade. In addition, there are disparities in modern contraceptive use across SSA countries. In 2021, the prevalence of modern contraceptive usage among women in SSA ranged from a high of 65.8% in Zimbabwe to a low of 6.9% in Somalia (United Nations, 2021). Nigerian government, in collaboration with other stakeholders, put in place various strategies and policies to increase uptake of family planning services; the goal for 2025 is to have a 36% modern contraceptive rate.

These are aimed at increasing the contraceptive prevalence rate (CPR) and reducing both the total fertility rate (TFR) and unmet need for family planning services. However, despite the various strategies and policies, contraceptive use in Nigeria remains low, and unmet need for family planning remains high. According to the Nigeria Demographic and Health Survey, the use of any modern method overwhelmingly increased from 4 to 12% over 28 years (1990-2018) (Fadeyibi *et. al.*, 2022). In 2023, CPR stood at 18 and 21 percent for all women and married or in a union; in sharp disparity to what is tenable in Ghana (26%), the USA (66%), and China (81%). This low contraceptive usage in Nigeria is therefore believed to drive

the total fertility rate, which is 5.6 percent at the national level and higher (6.7%) in the subregion of Kebbi, among other socioeconomic challenges.

Globally and also in Nigeria, studies indicate that modern contraceptive use is influenced by high levels of education, age, marital status, employment status, religion, income level, and cultural factors, among other things (Appiah *et. al.*, 2020; Asiedu *et. al.*, 2020; Blackstone *et. al.*, 2017; Hagan and Buxton, 2012; Monjok *et. al.*, 2010; Nketiah-Amponsah *et. al.*, 2022; Nyarko, 2020 and 2015; Stephenson *et. al.*, 2007; Ugboaja *et. al.*, 2011). Although studies abound on contraceptive use in Nigeria, none has comprehensively studied the use and choice of modern methods of contraception by gender (male- female) and how socioeconomic variables impact contraceptive practices at the subnational level (Kebbi). This study, therefore, is posed to close the void.

This knowledge will help program executors consider contextual socioeconomic influence during the design and development of family planning programs and Social and Behavioral Change Communication interventions.

METHODS

Data source

This research, a cross-sectional study, adopted the use of primary data. A structured questionnaire was used to elicit information from target respondents: women 15-49 and men 15-59 years. Additional data were sought from the recent NDHS (2008, 2013 & 2018), and relevant articles were consulted to corroborate primary data. The sampling frame was the population of Kebbi State represented by three (3) Local Government Areas (LGAs) out of 21 LGAs that made up the state. A multi-stage sampling technique was employed. The first stage was purposive sampling of three LGAs (Birnin-Kebbi, Fakai, and Suru), one from each

Senatorial zone, which is three per State in Nigeria. The Senatorial Zones are: Kebbi North, Kebbi Central, and Kebbi South. In Kebbi Central, Birnin-Kebbi was chosen; in Kebbi North, Suru; and in Kebbi South, Fakai.

The sample size was determined using Yamane's (1967 technique for sample size determination, which was 389 and rounded up to the nearest hundred, 400. In the second stage, purposive sampling was still adopted; thus, Ward centres were used. Out of 36, eleven communities were selected using the already existing council Wards structure; communities that served as ward centres were selected. This was to enable us to have accurate and reliable population figures for the selected areas using the 1991 census, which has census figures down to the Ward level. In the third stage, the selected communities (Ward Centres) were merged together, arranged alphabetically, and every third community was chosen using a systematic sampling technique; this allowed each and every community an equal chance to be chosen (see Table 1). Finally, the fourth stage, still using the systematic sampling method, was applied to select households for questionnaire administration. This is to enable everyone to have an equal opportunity to partake. Furthermore, to determine the sample interval, the systematic sampling approach was used ($\text{Total population}/\text{Sample size} = 345,541/400 = 8$).

Thus, an interval of eight respondents from one household to another was adopted. The target respondents were women aged 15-49 and men aged 15-59 in randomly selected households across the study area. A representative sample of approximately 350,000 people was targeted for this study. Therefore, 400 copies of the questionnaire were administered in all the chosen communities to the eligible respondents. Data obtained were analyzed using Excel and SPSS (v 28.0) for descriptive and inferential analysis to meet the set objectives for the study.

Table 1: Selected Communities in the LGAs

Senatorial Zones/LGAs	Communities	Sampled Communities	Number of Respondents
KEBBI CENTRAL			
BIRNIN KEBBI	* Ambursa		
	* B/Kebbi Dangkaladima		
	* B/Kebbi Marafa	B/Kebbi Marafa	99
	* Gawasu		
	* Godon Gafi		
	* Gulumbe	* Gulumbe	35
	* Kardi/Yamama		
	* Kola/Tarasa		
	* Lagga	* Lagga	08
	* Makera		
	* Maurida/Karyo		
	* Nassarawa I	* Nassarawa I	90
	* Nassarawa II		
	* Ujariyo		
	* Zauro	* Zauro	55
KEBBI SOUTH			
FAKAI	* Bajida		
	* Bangu		
	* Birnin Tudu	* Birnin Tudu	10
	* Denin Amana/Denin Gaba		
	* Fakai/Zussun		
	* Gulbin Kuka	* Gulbin Kuka	15
	* Inga Bulu/Maikende		
	* Kangi/Korama		
	* Mahuta	* Mahuta	45
	* Marafa		
KEBBI NORTH			
SURU	* Aljannare		
	* Bakuwai		
	* Bandan	* Bandan	20
	* Barbarejo		
	* Dakin Gari		
	* Dandane	* Dandane	11
	* Daniya/Shema		
	* Ginga		
	* Giro	* Giro	12
	* Kwaifa		
	* Suru		
Total	36	11	400

Source: Field Survey, 2023

RESULTS

Descriptive Results

Table 2 presents a brief overview of the results on the background characteristics of the study sample population. About one-third (23.2%) of the study sample were within 20-24 years, constituting the highest percentage, while those within the 25-29 age cohort were 16.8%. The majority (58.5%) in the study sample were males, while 41.5% were females. In terms of religion, almost 90 percent and about 11 percent were Muslims and Christians, respectively. Over half, close to 60 percent of the respondents were married or cohabiting, and about one-third (33.8%) were never married. The majority (75.3%) were Hausa/Fulani, followed by some 38.2% Dakarkari. The largest proportion of the respondents (68.4%) had a polygamous union, while 57.3% had two wives.

Table 3, on the other hand, presents brief results on the economic information of respondents. The majority (55.5%) of the respondents in the study sample had a tertiary level of education, 50.2% were employed, 41.8% were civil/public servants, and 35% had a monthly income range of 5-10,000.

Table 2. Socio-demographic characteristics of respondents

Variable	Frequency (N=400)	Percent
<i>Age</i>		
15-19	38	9.5
20-29	160	40.0
30-39	116	29.0
40-49	64	16.0
50-59	22	5.5
<i>Sex</i>		
Male	234	58.5
Female	166	41.5
<i>Religion</i>		
Islam	356	89.0
Christianity	43	10.8
Traditional	01	0.2
<i>Marital Status</i>		
Single	135	33.8
Married	237	59.2
Divorce	12	3.0
Widow	10	2.5
Separated	06	1.5

<i>Ethnic group</i>		
Hausa/Fulani	301	75.3
Yoruba	19	4.8
Igbo	07	1.8
Dakarkari	52	38.2
Others	21	5.3
<i>Marital Union</i>		
Monogamous	162	68.4
Polygamous	75	31.6
<i>Number of Wife/ves</i>		
1	07	6.8
2	59	57.3
3	20	19.4
4.	17	16.5

Source: Field Survey, 2023

Table 3. Economic Information of Respondents

<i>Education Levels</i>		
Islamic	026	6.5
Primary	037	9.2
Secondary	112	28.8
Tertiary	222	55.5
<i>Employment Status</i>		
Employed	201	50.2
Unemployed	199	49.8
<i>Occupation</i>		
Farming	85	21.2
Civil/public servant	129	41.8
Trading	31	11.3
Artisan	04	1.2
Unskilled labour	03	0.9
Student	44	11.0
Unemployed	28	8.2
Others	17	5.0
<i>Income (in thousands)</i>		
5-10	140	35.0
11-20	57	14.3
21-50	78	19.5
51-100	40	10.0
101+	85	21.2

Source: Field Survey, 2023

Note: 1 USD (\$) exchanged for ₦ 578 as at the time of the survey

Bivariate analyses

Socio-economic Variables and Modern Contraceptive Usage

A summary of the results from the chi-square analysis is shown in Table 4. Almost all the socioeconomic variables, such as age, marital status, ethnic affiliation, and occupation, show a significant relationship with modern contraceptive use of between 0.000 and 0.083. Even though this may seem small, it shows a statistically significant variance in modern contraceptive use at the sub-regional (Kebbi State) level, which will have a multiplier effect on the regional and national family planning outlook.

Age and Contraceptive Uptake

Table 4 is an illustration of respondents' age and contraceptive uptake. Use of condoms is the highest, with 10.5% of the respondents within the 30-34 age cohort; this is followed by the 25- 29 age group (9.7%), and the least is 50+ with just 1.0%. This is a clear indication that younger people use contraceptive methods more than older age cohorts. This may be connected to the fact that the young adjust more easily to innovations than the older population. The statistical analysis of Chi-square ($X^2=149.126$, $df=81$, $P=0.000$) shows a significant association between age and contraceptive usage; hence, there is a positive association between age and contraceptive use.

Marital Status and Contraceptive Uptake

Table 4 further reveals marital status and contraceptive utilization and choice. Married or cohabiting respondents have the highest use/choice of male condom and oral pill at 28.2% and 16.1%, respectively. Divorced, widow/separated have the lowest usage rate. The statistical analysis ($X^2=42.562$, $df=36$, $P=0.209$) shows a significant relationship between marital status and contraceptive use; thus, marital status influences contraceptive use and choice.

Ethnic group and Contraceptive Uptake

In terms of the distribution of contraceptive use and choice according to ethnic identity, Hausa/Fulani lead with 64.6%, followed by Dakarkari/Fakawa (14.7%), and the lowest (1.4%) was the Igbo ethnic group. A cursory look at the Table shows that condoms, pills, and implants have the highest choice and usage rates among the major ethnic groups of Hausa/Fulani and Dakarkari/Fakawa, while the Igbo ethnic group maintains its initial position of being the least (1.4%).

Religion and Contraceptive Uptake

Table 5 reveals the proportional distribution of modern contraceptive use by the major religious groups found in the study area. Overall, those practicing Islam have the highest uptake (87.6%), followed by Christian faithful (11.9%), and the lowest were the traditional group with just 0.5%. Furthermore, in terms of choice, condoms, the pill, and Intrauterine device have the highest percentage of use (38.1, 17.4%, and 8.3%), and Diaphragm/Foam/Jelly has the lowest usage (0.5%). The statistical analysis of Pearson Chi-square ($X^2=26.795$, $df=18$, $P=0.083$) also shows a positive impact of religion on contraceptive use and choice.

Table 4. Percentage distribution of current contraceptive users by age group, marital status, and ethnic group

Age group (in years)	Contraceptive Use						Row Total
	Pill	Condoms	Implant	Others	All	None	
15-19	1(0.5)	2(1.0)	0(0.0)	3(1.4)	0(0.0)	1(0.5)	7(3.2)
20-24	11(5.0)	18(8.2)	5(2.3)	6(2.9)	0(0.0)	7(3.2)	47(21.6)
25-29	6(2.8)	21(9.7)	4(1.8)	4(1.9)	1(0.5)	3(1.4)	39(17.9)
30-34	8(3.7)	23(10.5)	8(3.7)	5(2.3)	0(0.0)	1(0.5)	45(20.6)
35-39	8(3.7)	18(8.2)	4(1.8)	3(1.4)	0(.0)	1(0.5)	34(15.6)
40-44	6(2.8)	10(4.6)	2(0.9)	5(2.3)	2(0.9)	3(1.4)	28(12.8)
45-49	1(0.5)	4(1.9)	1(0.5)	3(1.5)	0(0.0)	0(0.0)	9(4.1)
50+	1(1.5)	2(1.0)	1(0.5)	3(1.5)	0(0.0)	2(0.9)	9(4.2)
Column Total	42(19.3)	98(44.9)	25(11.5)	32(14.7)	3(1.4)	18(8.2)	218(100.0)
Calculated	X ² =149.126		df=81	P value=0.000		Remark=Significant	
Contraceptive Use	Marital Status					Row Total	
	Single	Married	Divorced	Widowed	Separated		
Pill	4(1.8)	35(16.1)	1(0.5)	1(0.5)	1(0.5)	42(19.3)	
Male Condom	14(6.4)	62(28.2)	2(0.9)	0(0.0)	1(0.5)	75(36.2)	
Female Condom	6(2.8)	12(5.5)	1(0.5)	0(0.0)	0(0.0)	19(8.7)	
Injection	0(0.0)	5(2.3)	0(0.0)	1(0.5)	0(0.0)	6(2.8)	
IUD	6(2.8)	13(6.0)	0(0.0)	1(0.5)	0(0.0)	20(9.2)	
Diaphragm/Foam/	1(0.5)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	1(0.5)	

Jelly							
Implant	0(0.0)	23(10.6)	2(0.9)	0(0.0)	0(0.0)	25(11.5)	
Rhythm	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	
Others	2(0.9)	3(1.4)	0(0.0)	0(0.0)	0(0.0)	5(2.3)	
All of the above	1(0.5)	2(0.9)	0(0.0)	0(0.0)	0(0.0)	3(1.4)	
None of the above	3(1.4)	14(6.4)	0(0.0)	0(0.0)	1(0.5)	18(8.3)	
Column Total	37(17.0)	169(77.5)	6(2.8)	3(1.4)	3(1.4)	218(100.0)	
Calculated	X ² =42.562		df=36	P value=0.209	Remark=Insignificant		
Ethnic group	Contraceptive Use						
	Pill	Condoms	Implant	Others	All	None	Row Total
Hausa/Fulani	32(14.7)	65(29.8)	21(9.6)	22(10.2)	1(0.5)	15(6.9)	56(71.5)
Dakarkari	5(2.3)	17(7.8)	2(1.0)	8(3.8)	0(0.0)	2(0.9)	34(15.6)
Igbo	0(0.0)	3(1.4)	1(0.5)	0(0.0)	0(0.0)	0(0.0)	4(1.8)
Yoruba	3(1.4)	5(2.3)	0(0.0)	0(0.0)	1(0.5)	1(0.5)	11(5.0)
Others	2(0.7)	8(3.7)	1(0.5)	1(0.5)	1(0.5)	0(0.0)	13(5.9)
Column Total	42(19.3)	98(44.9)	25(11.5)	32(14.8)	3(1.4)	18(8.3)	218(100.0)
Calculated	X ² =67.353		df=63	P value=0.331	Remark=Insignificant		

Source: Field Survey, 2023

Educational attainment and Contraceptive practice

Table 5 shows respondents' educational level and contraceptive uptake. Those with tertiary and secondary levels of education have the bulk of contraceptive utilization, 65.8% and 24.8%, respectively, while those with Islamic education have the lowest (2.8%) user rate. This finding shows that the more educated people are, the higher the contraceptive usage; thus, education is a great influencer of contraceptive use. Also, the statistical analysis of $X^2=131.981$, $df=54$, $P=0.000$ shows a significant relationship between educational attainment and contraceptive use and choice.

Occupation and Contraceptive Use

Table 6 shows the occupation of the study sample and contraceptive utilization and choice. Civil/public servants have the highest proportion of 48.5%, while artisans and unskilled labour have the least, with 1.0% each. In terms of a particular type of contraceptive use, condoms have the highest (44%), followed by oral pills (17.7%), *inter alia*. Furthermore, the statistical dissection of $X^2=98.763$, $df=63$, $P=0.003$

indicates a significant relationship between occupation type and contraceptive uptake; therefore, the inference is that occupation type has a positive impact on contraceptive utilization and choice.

Table 5. Percentage distribution of current contraceptive users by religious group and educational attainment

Contraceptive Use	Religious group				
	Islam	Christianity	Traditional	Row Total	
Pill	38(17.4)	4(1.8)	0(0.0)	42(19.3)	
Male Condom	70(32.1)	9(4.1)	0(0.0)	79(36.2)	
Female Condom	13(6.0)	6(2.8)	0(0.0)	19(8.7)	
Injection	4(1.8)	2(0.9)	0(0.0)	6(2.8)	
IUD	18(8.3)	2(0.9)	0(0.0)	20(9.2)	
Diaphragm/Foam/Jelly	1(0.5)	0(0.0)	0(0.0)	1(0.5)	
Implant	25(11.5)	0(0.0)	0(0.0)	25(11.5)	
Rhythm	0(0.0)	0(0.0)	0(0.0)	0(0.0)	
Others	4(1.8)	1(0.5)	0(0.0)	5(2.3)	
All of the above	2(0.9)	1(0.5)	0(0.0)	3(1.4)	
None of the above	16(7.3)	1(0.5)	1(0.5)	18(8.3)	
Column Total	191(87.6)	26(11.9)	1(0.5)	218(100.0)	
Calculated	X ² =26.795	df=18	P value=0.083	Remark=Significant	
Contraceptive Use	Educational attainment				
	Islam	Primary	Secondary	Tertiary	Row Total
Pill	1(0.5)	3(1.4)	8(3.7)	30(13.8)	42(19.3)
Male Condom	1(0.5)	8(3.7)	23(10.6)	47(21.5)	79(36.2)
Female Condom	0(0.0)	1(0.5)	7(3.2)	11(5.1)	19(8.7)
Injection	0(0.0)	1(0.5)	1(0.5)	4(1.9)	6(2.8)
IUD	0(0.0)	0(0.0)	3(1.4)	17(7.8)	20(9.2)
Diaphragm/Foam/Jelly	1(0.5)	0(0.0)	0(0.0)	0(0.0)	1(0.5)
Implant	0(0.0)	0(0.0)	2(0.9)	23(10.6)	25(11.5)
Rhythm	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Others	2(0.9)	1(0.5)	0(0.0)	2(0.9)	5(2.3)
All of the above	0(0.0)	0(0.0)	0(0.0)	3(1.4)	3(1.4)

None of the above	1(0.5)	2(0.9)	10(4.6)	5(2.3)	18(8.3)
Column Total	6(2.8)	16(7.3)	54(24.8)	142(65.8)	218(100.0)
Calculated	$X^2=131.981$	df=54	P value=0.000	Remark=Significant	

Source: Field Survey, 2023

Monthly Income and Contraceptive Use

About 30% of those who earn 5-10,000 naira were the majority in terms of contraceptive usage, followed by those who earn 21-50,000 (25%), while those who earn 51-100,000 were the least (12%) users, among others. A further glance at Table 6 shows that the male condom has the highest usage rate (36.8%), followed by the pill 17.6% and diaphragm/foam/jelly has the lowest with just 0.5%. The inference is that those with meagre monthly income utilized modern contraceptives more than those with high and higher monthly income; consequently, the higher the income, the lower the usage, while the lower the income, the higher the usage of family planning methods. The reason for this may be that those with meagre monthly income don't want to bear children beyond their means. In addition, the statistical analysis of Chi-square ($X^2=65.988$, $df=54$, $P=0.127$) signifies a positive association between monthly income and contraceptive uptake; therefore, monthly income has a positive influence on contraceptive use.

Table 6. Distribution of current contraceptive users by Occupation and Income

Occupation type	Contraceptive Use						Row Total
	Pill	Condoms	Implant	Others	All	None	
Farming	5(2.5)	23(11.6)	1(0.5)	7(3.5)	0(0.0)	3(1.5)	39(19.7)
Civil/public service	18(9.1)	44(22.2)	14(7.1)	13(6.5)	2(1.0)	5(2.5)	96(48.5)
Trading	3(1.5)	6(3.0)	3(1.5)	4(2.0)	0(0.0)	4(2.0)	20(10.1)
Artisan	0(0.0)	2(1.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	2(1.0)
Unskilled labour	0(0.0)	1(0.5)	0(0.0)	1(0.5)	0(0.0)	0(0.0)	2(1.0)
Student	3(1.5)	4(2.0)	2(1.0)	2(1.0)	0(0.0)	3(1.5)	14(7.1)
Unemployed	2(1.0)	6(3.0)	4(2.0)	3(1.5)	0(0.0)	1(0.5)	16(8.1)
Others	4(2.0)	1(0.5)	0(0.0)	2(1.0)	1(0.5)	1(0.5)	9(4.5)
Column Total	35(17.7)	87(44.0)	24(12.1)	32(16.1)	3(1.5)	17(8.6)	198(100.0)

Calculated	X ² =98.763	df=63	P value=0.003	Remark=Significant		
Contraceptive Use	Monthly Income (In Naira)					Row Total
	5-10,000	11-20,000	21-50,000	51-100,000	101,000+	
Pill	14(6.8)	3(1.5)	8(3.9)	6(2.9)	5(2.5)	36(17.6)
Male Condom	20(9.8)	24(11.7)	15(7.4)	5(5.5)	11(5.4)	75(36.8)
Female Condom	4(2.0)	8(4.0)	3(1.5)	1(0.5)	2(1.0)	18(8.8)
Injection	3(1.5)	0(0.0)	2(1.0)	0(0.0)	1(0.5)	6(2.9)
IUD	4(2.0)	3(1.5)	9(4.4)	3(1.5)	1(0.5)	20(9.8)
Diaphragm/Foam/Jelly	1(0.5)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	1(0.5)
Implant	4(2.0)	1(0.5)	6(2.9)	5(2.5)	6(2.9)	22(10.8)
Rhythm	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Others	1(0.5)	0(0.0)	2(1.0)	1(0.5)	1(0.5)	5(2.5)
All of the above	0(0.0)	0(0.0)	1(0.5)	1(0.5)	1(0.5)	3(1.5)
None of the above	9(4.4)	2(1.0)	4(2.0)	2(1.0)	1(0.5)	18(8.8)
Column Total	60(29.4)	41(20.1)	50(24.5)	24(11.8)	29(14.2)	204(100.0)
Calculated	X ² =65.988	df=54	P value=0.127	Remark=Insignificant		

Source: Field Survey, 2023

DISCUSSIONS

This study provides empirical information on the socioeconomic determinants of the use and choice of modern contraceptive methods in Kebbi State, Nigeria. The study shows a considerably low modern contraceptive prevalence among the study sample. In effect, unmet need for contraception is found to play a significant role in unintended pregnancies and the high fertility rate being experienced in the State. The findings further revealed that age, marital status, ethnic affiliation, and occupation were positively associated (0.000-0.083) with contraceptive usage. Use of condoms was highest (10.5%) among respondents within the 30-34 age cohort; this was followed by the 25-29 age group (9.7%), and the least was 50+ with just 1.0%. The statistical analysis of Chi-square ($X^2 = 149.126$, $df=81$, $P=0.000$) shows a significant association between age and contraceptive usage. Studies have reported that contraceptive use increases with young age (15-39 years) and decreases with older age (40-49 years). It is believed that most older women in

their menopausal stage, mostly due to reduced sexual activity, are less likely to use contraceptives (Lasong *et. al.*, 2020). Lasong *et al.* (2020) in Zambia also revealed that older age (40-49 years) was negatively associated with contraceptive use compared with younger age (15-19 years), which they further posited is consistent with reports from Malawi and Ethiopia.

There is also an indication that religious affiliation affects modern contraception, with Christian women being highly associated with modern contraceptive use compared to their counterparts. Similar findings have been previously documented in Ghana (Nketiah-Amponsah, 2012) and Nigeria (Unumeri *et. al.*, 2015). Thus, being a Muslim woman and having other religious affiliations provides a considerable disadvantage in the utilization of modern contraceptives (Unumeri *et. al.*, 2015). This study corroborates previous studies revealing that those practicing Islam have the highest (87.6%) and are more likely to use contraceptive methods than Christian faithful (11.9%) and traditionalists (0.5%). Condom, pill, and Intrauterine device have the highest choice and usage rates (38.1, 17.4, and 8.3%). The statistical analysis of Pearson Chi-square ($X^2=26.795$, $df=18$, $P=0.083$) also shows a positive impact of religion on contraceptive use and choice.

Again, in this study, some socioeconomic factors appear to be significantly associated with modern contraception among reproductive-age people in Kebbi. For instance, educational attainment has a strong positive association with modern contraception use. Those with tertiary and secondary levels of education utilized modern contraceptives (65.8% and 24.8%, respectively) more than those with other levels of education. This finding shows that the more educated people are, the more contraceptive use; thus, education is a great influencer of contraceptive use. Also, the statistical analysis of $X^2=131.981$, $df=54$, $P=0.000$ shows a significant

relationship between educational attainment and contraceptive use and choice. Previous studies carried out in Ghana, Nigeria, Ethiopia, and Malawi reported that higher educational attainment is a reinforcing factor for modern contraceptive methods.

The positive effect of educational attainment on modern contraceptive use is well-documented in the literature (Lamidi, 2015; Lakew et. al., 2013; Palamuleni, 2013). Higher educational attainment may provide a contraceptive advantage in two major ways. First, educational attainment may provide women with accurate knowledge about contraception, contraceptive options, and an understanding of the benefits that can be derived from it. Second, the long duration required by higher educational attainment may in itself encourage sexually active young women to use modern contraception as they seek to postpone pregnancy until after school or perhaps employment (Nyarko, 2020).

Additionally, the findings from this research further show a significant association between the work status of the people and modern contraception. Civil/public servants have the highest proportion (48.5%). Also, the statistical dissection of $X^2=98.763$, $df=63$, $P=0.003$ indicates a significant relationship between occupation type and contraceptive uptake; therefore, the inference is that occupation type has a positive impact on contraceptive utilization and choice. Similar studies in various places were in agreement with this finding. For instance, Lasong et. al. (2020), in their study in Zambia, revealed that wealthier women were more likely to use contraceptives than poor women. This might be due to the capacity to purchase modern contraceptives without necessarily relying on their partners. These results further corroborate other studies which established that wealthier

women were more likely to use contraceptive methods than women of lower income (Rasooly *et. al.*, 2015; Apanga and Adam, 2015).

Also, Nyarko (2020), in his findings, discovered that unemployed women are less likely to use modern contraception compared to their employed counterparts. This provides notable evidence that women's employment is a boost for modern contraceptive use, which may be down to purchasing power or affordability. He went further to say that much extant research also corroborates the positive effect of women's employment on modern contraceptive use. This advantage may probably be due to the effect of the affordability of modern contraception services on the part of working women.

CONCLUSION

Modern contraceptive use in Kebbi, just like other Northwestern states of Nigeria and many developing countries (Ghana, Kenya, Zambia, Malawi, etc.), among the reproductive age group is low. Our results showed a negative relationship between marital status and monthly income and contraceptive usage. Identifying individuals from socioeconomic backgrounds that may have less access to information about contraceptive options, partner's disapproval, or potential negative consequences within the relationship will lead to lower usage rates. Also, individuals with lower income face barriers to accessing family planning services due to cost, transportation difficulties, or limited availability in their area. To improve contraceptive use among individuals with lower income or who are in marriage, interventions by concerned stakeholders should focus on increasing access to affordable family planning services, promoting education about contraceptive options, and empowering individuals to make informed decisions regarding their reproductive health.

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REFERENCES

- Abiodun OM, Balogun OR. Sexual activity and contraceptive use among young female students of tertiary educational institutions in Ilorin, Nigeria. *Contraception*. 2009; 79:146-9.
- Apanga PA, Adam MA. Factors influencing the uptake of family planning services in the Talensi district, Ghana. *Pan African Medical Journal* 2015; 20:10.
- Appiah F, Seidu A-A, Ahinkorah BO, Baatiema L, Ameyaw EK. Trends and determinants of contraceptive use among female adolescents in Ghana: analysis of 2003-2014 Demographic and Health Surveys. *SSM Population Health*. 2020; 10:100554-100554.
- Asiedu A, Asare BY-A, Dwumfour-Asare B, Baaf D, Adam A-R, Aryee S, et al. Determinants of modern contraceptive use: a cross-sectional study among market women in the Ashiaman Municipality of Ghana. *International Journal of African Nursing Science*. 2020; 12:100184.
- Blackstone SR, Nwaozuru U, Iwelunmor J. Factors influencing contraceptive use in Sub-Saharan Africa: a systematic review. *Int Q Community Health Educ*. 2017; 37:79-91.
- Cardona C., Rusatira JC., Salmeron C., Martinez-Back M., Rimon JG., Anglewicz P and Ahmed S., 2025. Progress in reducing socioeconomic inequalities in the use of modern contraceptives in 48 focus countries as part of the FP2030 initiative between 1990 and 2020: a population-based analysis
- Centre for Disease Control and Prevention (2020). Reproductive Health. U.S. Department of Health and Human Services. *USA.gov*. (<https://www.cdc.gov/reproductivehealth/contraception/index.htm>).
- Fadeyibi O, Alade M, Adebayo S, Erinfolami T, Mustapha F and Yaradua S (2022) Household Structure and Contraceptive Use in Nigeria. *Front. Glob. Women's Health* 3: 821178. doi:10.3389/fgwh.2022.821178

Guttmacher Institute. Adding it up: Investing in Contraception and Maternal and Newborn Health, 2017. New York: Guttmacher Institute; 2017.

Hagan JE, Buxton C. Contraceptive Knowledge, perceptions and use among adolescents in selected senior high schools in the central region of Ghana. J Soc Res. 2012; 3:170-80.

Ikeako, L., Joe-Ikechebelu, N., Nwankwo, B., Onyemachi, P., Chikezie, J., Abali, I., Anene, J., Azuike, E., and Azuike, E. (2018) *Determinants of use of Modern Family Planning among Northern Nigeria Women: A Secondary Analysis of 2013 NDHS*

Kantorová V, Wheldon MC, Uefng P, Dasgupta AN. Estimating progress towards meeting women's contraceptive needs in 185 countries: a Bayesian hierarchical modelling study. PLoS Med. 2020;17(2): e1003026.

Kiwia, J., Shariff, NJ., Nyaberi, JM., Peter Kamau Wanyoike, KP., (2019) Assessment of Level of Knowledge on Contraceptive Uptake among Women of Reproductive Age at Kahe Ward in Moshi, Kilimanjaro-Tanzania *Internationals Journal of Academics & Research* Volume 1 Issue 3 ISSN:2617-4391 *IJARKE Science & Technology Journal* DOI:10.32898/istj.01/1.3article02 www.ijarke.com

Lamidi EO. State Variations in Women's Socioeconomic Status and Use of Modern Contraceptives in Nigeria. PLoS ONE. 2015; 10(8): e0135172. <https://doi.org/10.1371/journal.pone.0135172> PMID: 26258578

Lakew Y, Reda AA, Tamene H, Benedict S, Deribe K. Geographical variation and factors influencing modern contraceptive use among married women in Ethiopia: evidence from a national population-based survey. Reprod. Health. 2013; 10: 52. <https://doi.org/10.1186/1742-4755-10-52> PMID:24067083

Lasong J, Zhang Y, Gebremedhin SA, et al. Determinants of modern contraceptive use among married women of reproductive age: a cross-sectional study in rural Zambia. BMJ Open 2020;10: e030980. doi:10.1136/bmjopen-2019-030980 <https://dx.doi.org/10.1136/bmjopen-2019-030980>

Monjok E, Smesny A, Ekabua J, Essien E. Contraceptive practices in Nigeria: literature review and recommendation for future policy decisions. Open Access Journal. 2010; 1:9-22.

Nketiah-Amponsah E, Ampaw S and Bafour PT (2022) Tropical Medicine and Health (2022) BMC 50:33 <https://doi.org/10.1186/s41182-022-00424-5>

Nketiah-Amponsah E, Arthur E, Aaron A. Correlates of Contraceptive use among Ghanaian women of Reproductive Age (15-49 Years). African Journal of Reproductive Health. 2012; 16(3): 154-169

Nyarko SH (2020) Spatial variations and socioeconomic determinants of modern contraceptive use in Ghana: A Bayesian multilevel analysis. PLoS ONE 15(3): e0230139. <https://doi.org/10.1371/journal.pone.0230139>

Nyarko SH. Prevalence and correlates of contraceptive use among female adolescents in Ghana. BMC Women's Health. 2015; 15:60-60.

Rasooly MH, Ali MM, Brown NJW, et al. Uptake and predictors of contraceptive use in Afghan women. BMC Women's Health 2015; 15:9.

Statista 2023: Health, Pharma & Medtech > State of Health <https://www.statista.com/statistics/1268145/contraceptive-prevalence-rate-among-women-in-nigeria/>

Stephenson R, Baschieri A, Clements S, Hennink M, Madise N. Contextual influences on modern contraceptive use in Sub-Saharan Africa. American Journal Public Health. 2007; 97:1233-40

Palamuleni ME. Socio-Economic and Demographic Factors Affecting Contraceptive Use in Malawi. African Journal of Reproductive Health. 2013; 17(3): 91-104. PMID: 24069771

Ugboaja JO, Nwosu BO, Ifeadike CO, Nnebue CC, Obi-Nwosu AI. Contraceptive choices and practices among urban women in southeastern Nigeria. *Nigerian J Med.* 2011; 20:360-5.

United Nations Department of Economic and Social Affairs, Population Division (2021). *World Contraceptive Use.* 2021.6.

United Nations, Department of Economic and Social Affairs, Population Division (2019). *Family Planning and the 2030 Agenda for Sustainable Development: Data Booklet.* (ST/ESA/SER.A/429)

United Nations (2017): Department of Economic and Social Affairs, Sustainable Development <https://sdgs.un.org/topics/health-and-population> (accessed on 17th December, 2024).

Unumeri G, Ishaku S, Ahonsi B, Oginni A. Contraceptive Use and Its Socio-economic Determinants among Women in North-East and North-West Regions of Nigeria: A Comparative Analysis. *African Population Studies* 2015; 29(2): 1851-1867

World Health Organization (WHO) 2023: Contraception <https://www.who.int/health-topics/contraception>

World Health Organization (WHO) (2020) *Family Planning/Contraceptive methods* accessed on 22/01/2025 at <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>

World Health Organization. *Contraception: Fact sheet.* Geneva: WHO; 2014.